Contaminant Screening Study
Libby Asbestos Site, Operable Unit 4
Libby, Montana

Draft Sampling and Analysis Plan Addendum for the Former Landfill Site Investigation

December 2005

Sampling and Analysis Plan Addendum

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Prepared for:

U.S. Department of Transportation
Research and Special Programs Administration
John A. Volpe National Transportation Systems Center
Environmental Engineering Division, DTS-33
55 Broadway, Kendall Square
Cambridge, Massachusetts 02142

Prepared by:

CDM
1331 17th Street, Suite 1100
Denver, Colorado 80202

CDM

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Prepared by: _____ Date: _____
Nicole Bielecki
CDM Project Scientist

Reviewed by: _____ Date: _____
Dave Schroeder
CDM Project Scientist

Reviewed by: _____ Date: _____
Jeff Montera
CDM Project Manager/Quality Assurance Coordinator

Approved by: _____ Date: _____
Jim Christiansen
EPA Region VIII Remedial Project Manager

CDM

Contents

Acronyms

bgs	below ground surface
CDM	CDM Federal Programs Corporation
CSS	contaminant screening study
ft	feet
GPS	global positioning system
pt	point
QC	quality control
SAP	sampling and analysis plan
Site	former Landfill
SOPs	standard operating procedures

Section 1
Introduction

This addendum outlines the site-specific requirements to conduct the contaminant screening study (CSS) at the City of Libby Former Landfill (Site). All rationale, data quality objectives, quality assurance procedures, and standard operating procedures (SOPs) from the CSS Sampling and Analysis Plan Revision 1 (SAP) (with modifications) still apply (CDM Federal Programs Corporation [CDM] 2003).

1.1 Site Location and Background

The Site is situated north of the city of Libby, Montana on the north side of Kootenai River Road and south of Pipe Creek Road (Figure 1-1). There is no address associated with the Site.

The Site encompasses approximately 5 acres and is currently undeveloped, with portions of overgrown vegetation. The northern portion of the Site remains wooded. The site operated as a dump and burn landfill prior to 1970. The majority of the operations were confined to the southwest section of the property. Waste accepted during operation consisted mainly of municipal waste. Additional wastes disposed of at the landfill included snow removal debris and old vehicles. Old septic trenches are present in the northern section of the Site. The landfill was unregulated during operation and the exact nature of the debris is unknown.

The Site is owned by the City of Libby. The only structure on the property is the Lincoln County Animal Shelter. A CSS was conducted at the Animal Shelter in July 2002. The results of the inspection indicated that no Libby vermiculite was present at the Animal Shelter. During a site visit on September 30, 2003, vermiculite was observed along a dirt path running east to west through the Site, and in a debris pile in the wooded portion of the property.

1.2 Objective

The objective of this addendum is to present a site-specific sampling plan to conduct soil sampling at the Site.

Section 2
Field Activities

CSS activities at the Site will consist of a verbal interview, visual inspection, and surface soil sampling.

2.1 Verbal Interview

A verbal interview to discuss concerns and obtain historical information about the Site was conducted by field personnel with Ron Anderson (Sanitarian) of the City of Libby. The information obtained in the interview is presented in Section 1.

2.2 Visual Inspection

The field team will conduct an inspection for visible vermiculite of the entire property. Soil samples will be collected from each of the grids indicated in Figure 2-1. The team will record specific details in the field logbook and on the property sketch portion of the information field form. This will include the location of contaminated source and depth observed during sampling. No additional effort will be conducted to determine the depth below ground surface to which the source extends.

2.3 Soil Sampling

The soil sampling process, as discussed in the CSS SAP, will involve the following steps:

- Locate the predetermined sample location and select composite subsample locations
- Collect samples from composite locations
- Complete the sample field forms included in Appendix A (e.g., record subsample locations) and sketch additional structures, features, etc. not already on the Site map
- Decontaminate all nondisposable sampling equipment

2.3.1 Sample Locations and Rationale

Sample locations are mapped on Site figure (Figure 2-1), with the State Plane coordinates. To select the sampling locations, the Site was divided into 100 foot by 100 foot grids. The center of each grid square will be the center subsample. This sampling design was selected to provide an even distribution of samples across the Site, which will generally characterize the nature and extent of contamination across the property.

Each coordinate set will be located using the navigation function of the global positioning system (GPS) equipment. Once located, the coordinates will be quality control (QC) checked by a second field member. If the sample location needs to be moved, the new coordinates will be recorded.

2.3.2 Sample Collection

Surface soil samples will be collected from all designated sample locations identified on Figure 2-1.

Surface soil samples will extend from the surface to approximately 6 inches below ground surface (bgs). All surface samples will be collected in accordance with procedures identified in the CSS SAP, Revision 1 (CDM 2003) with modifications. The surface samples will only identify surficial contamination and, therefore, if any subsurface contamination is anticipated from the surface sample analyses, subsurface samples may be collected at a later date.

All samples will consist of a 5-point (pt) composite. The 5-pt composite sample will be comprised of a center subsample located at the coordinates listed in the Site figure and four additional subsamples approximately 25 ft on each directional side of the center subsample (i.e., north, south, east, and west). QC samples, including field duplicate samples and equipment blanks, will be collected and analyzed in accordance with the CSS SAP, Revision 1 (CDM 2003).

2.3.3 Field Form Completion and Feature/Structure Sketch

For each sample collected, a field sample data sheet for soil (Appendix A) will be completed. Each form will identify the samplers, sample identification numbers, and location of subsamples and will be completed in accordance with SOP CDM-LIBBY-03, Completion of Field Sample Data Sheets and Addendum No. 1. The sample identification number associated with the sample point will be in the form of CS-#####. For each sample collected, a GPS point will be recorded from the center location of the subsamples. The other subsample locations will be identified using a compass and measuring instrument. For each of these non-center subsample locations, the distance and direction from the center location will be recorded. Any obstacles or reasons for movement or deletion of a sample or subsample will be recorded on the field form. Additionally, any structure or other relevant feature (e.g., lumber piles, roads, drainage ditches, utility poles, etc.) not already on the Site figure will be sketched onto a copy of the Site figure or sample form.

2.3.4 Decontamination

All decontamination will be conducted in accordance with the CSS SAP Revision 1, with applicable modifications. All non-disposable sampling equipment will be decontaminated between sample locations but will not be decontaminated between subsample locations.

Section 3
Data Validation

Data quality evaluation will be performed in accordance with the CSS SAP Revision 1 (CDM 2003).

Section 4
References

CDM. 2002. Final Sampling and Analysis Plan, Remedial Investigation, Contaminant Screening Study. April.

_____. 2004. Close Support Facility, Soil Preparation Plan, Revision 1, Libby, Montana Asbestos Project, Sample Processing. March.

U.S. Environmental Protection Agency. 2002. Asbestos Analysis of Soil by Scanning Microscopy and Energy Dispersive X-Ray Spectroscopy, Revision 0. May.

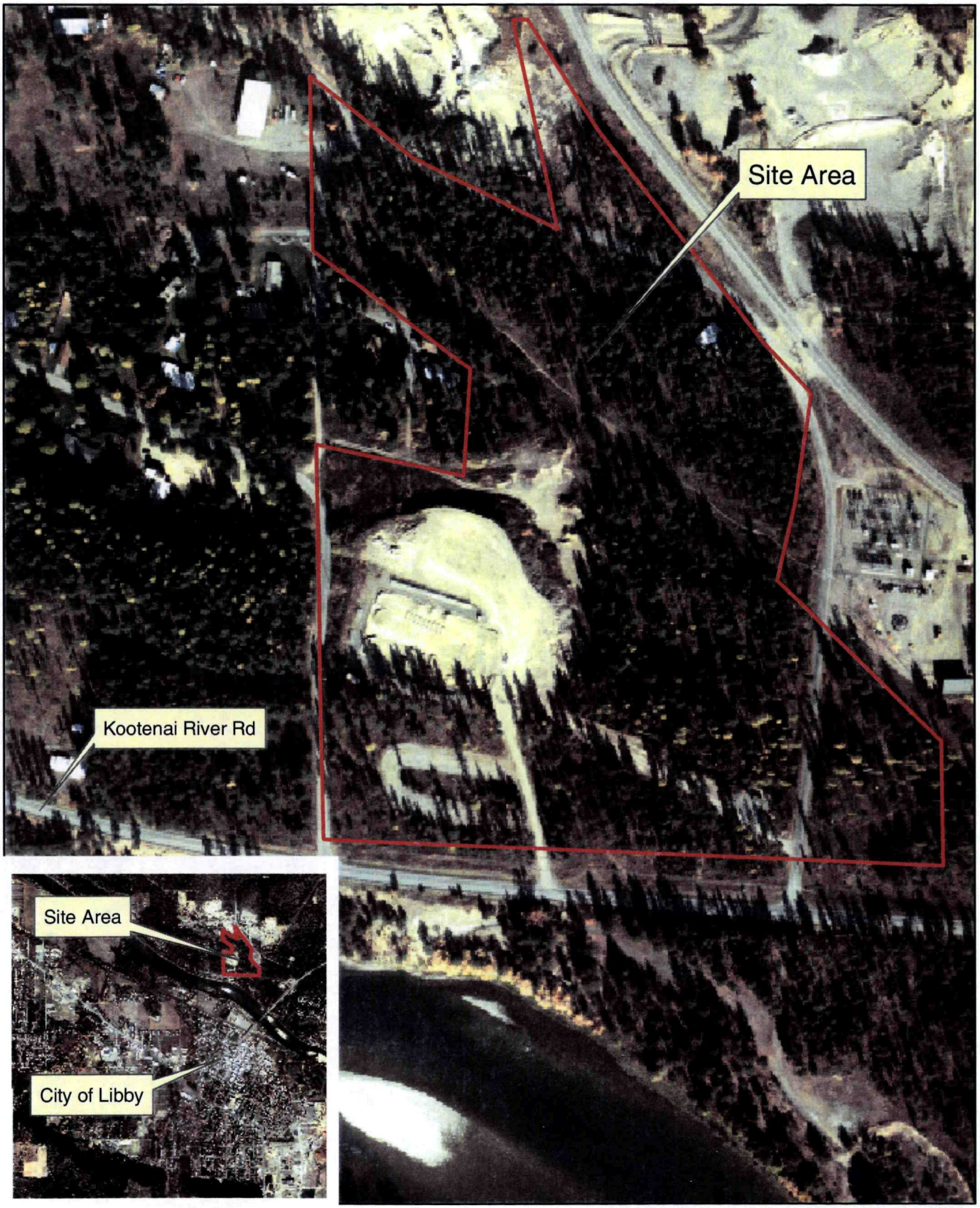

Figure 1-1 Site Location, Former Landfill

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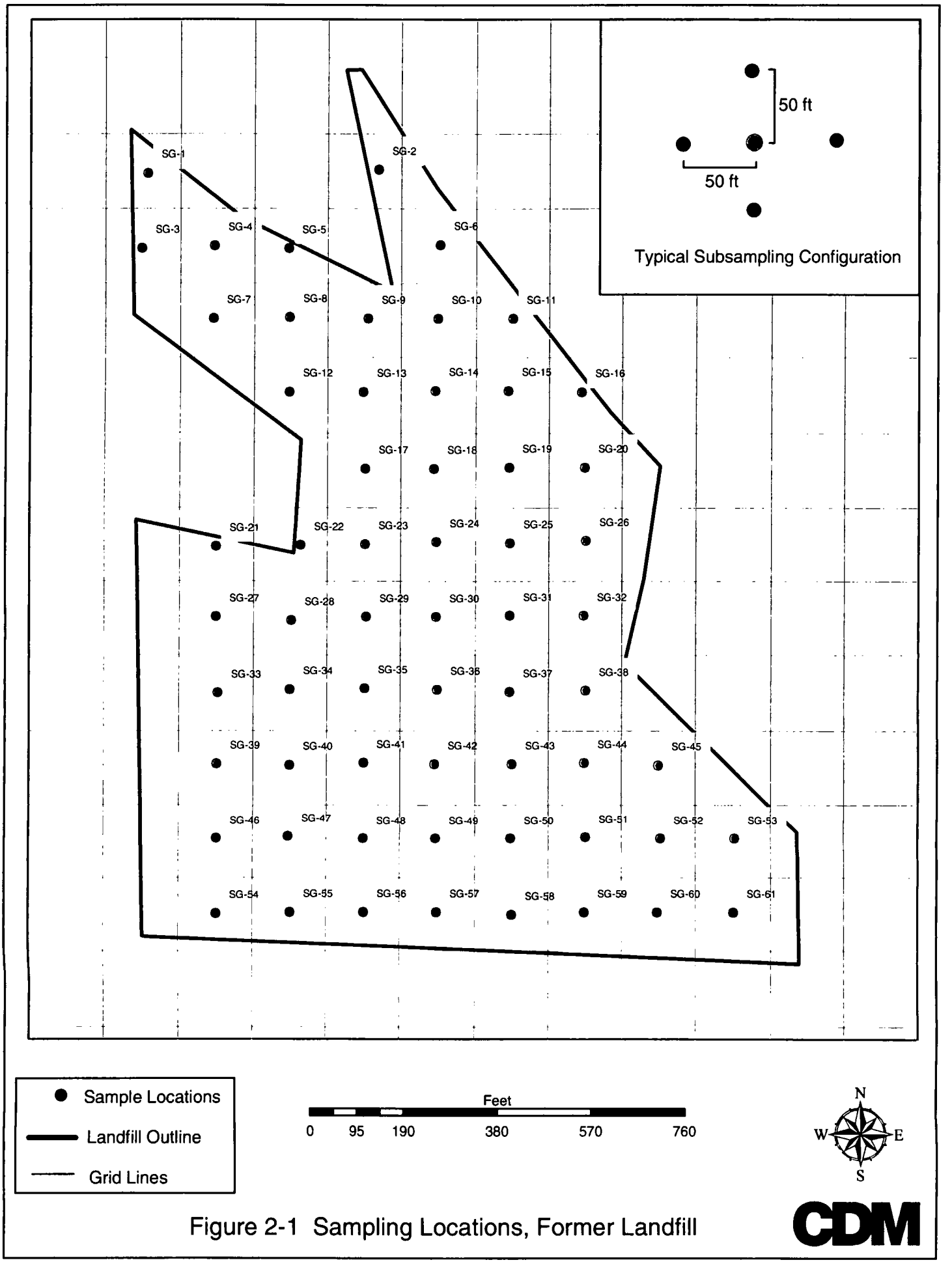

Figure 2-1 Sampling Locations, Former Landfill

Appendix A
Field Sample Data Sheet for Soil

Sheet No.: CSS-S- _____

CONTAMINANT SCREENING STUDY/REMEDIAL INVESTIGATION
FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL

Scenario No.: NA Field Logbook No:_____ Page No:_____ Sampling Date: _____

Address:_____Owner/Tenant:_____

Business Name: _____

Land Use: (circle) Residential School Commercial Mining Roadway Other ( )

Sampling Team: (circle) CDM MACTEC Other _____ Names:_____

Data Item	Sample 1	Sample 2	Sample 3
Index ID			
Location ID			
Sample Group			
Location Description (circle)	Back yard Front yard Side yard Driveway Other _____	Back yard Front yard Side yard Driveway Other _____	Back yard Front yard Side yard Driveway Other _____
Category (circle)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)	FS FD of _____ Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soil Other _____	Surface Soil Other _____	Surface Soil Other _____
Type (circle)	Grab Comp. # subsamples _____	Grab Comp. # subsamples _____	Grab Comp. # subsamples _____
Sample Time			
Top Depth (in.)			
Bottom Depth (in.)			
Field Comments Note if vermiculite is visible in sampled area	BD-_____	BD-_____	BD-_____
Entered (LFO) _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____

For Field Team Completion (Provide Initials)	Completed by_____	QC by_____